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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/571,055	02/08/2007	Juichi Fukatani	Q93648	9072
23373	7590	01/16/2009	EXAMINER	
SUGHRUE MION, PLLC			NAKARANI, DHIRAJLAL S	
2100 PENNSYLVANIA AVENUE, N.W.				
SUITE 800			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20037			1794	
			MAIL DATE	DELIVERY MODE
			01/16/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/571,055	FUKATANI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	D. S. Nakarani	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 06 October 2008.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 5-10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 5-10 and 12-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 5 and 13-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5, line 6, the word “proyl” renders claim indefinite. What is "proyl"?

Clarification requested. Changing the word “proyl” to the word -- propyl -- may overcome the rejection.

Claims 13-20 depends from the cancelled claims. Therefore claims 13-20 are incomplete claims.

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5. Claims 5 and 12-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Coaker et al (U.S. Patent 3,841,890).

Coaker et al disclose an interlayer and a glass laminate made using the interlayer (Examples). The interlayer comprises: polyvinyl butyral resin, blend of a phosphate plasticizer and a diester of an aliphatic dicarboxylic acid (Abstract). The phosphate plasticizers include claimed moisture resistance improver (Col. 2, line 10 to col. 3, line 6). Coaker et al disclose a laminated glass with an improved as stability (Table II). Coaker et al do not disclose claimed solubility parameter. However since the Coaker et al's phosphate plasticizers are same as the claimed moisture resistance improvers in the instant invention, the claimed solubility parameters are deemed to be inherently there unless shown otherwise.

6. Claims 5 and 12-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Ma (U.S. Patent 7,238,427 B2).

Ma discloses a fire resistant polymer sheet (i. e. an interlayer) and a laminated glass made using the fire resistant polymer sheet. The fire resistant polymer sheet comprises polyvinyl butyral resin, phosphate ester plasticizer such as tributyl phosphate and an adhesion control agents (Examples 1-6). The phosphate ester plasticizers include claimed moisture resistance improver (Col. 6, line 17 to col. 7, line 12). Ma also discloses addition of other additives such as adhesion control agent, pigments, dye, UV stabilizers, antioxidants, anti-block agents, IR absorber etc. (Col. 9, lines 62-67). Glass laminate comprises: glass panel/polymer sheet with phosphate ester

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plasticizer/intumescent layer/glass (Col. 4, lines 19-60). Ma does not disclose claimed solubility parameter. However since the phosphate ester plasticizers are the same as the claimed moisture resistance improvers, the claimed solubility parameters are deemed to be inherently there unless shown otherwise.

7. Claims 5-10 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobata et al (U.S. Patent 6,673,456 B1) in view of Coaker et al (U.S. Patent 3,841,890), Ma (U.S. Patent 7,238,427 B2) and Mont et al (U.S. Patent 4,027,069).

Kobata et al disclose an interlayer comprising polyvinyl butyral resin, plasticizer, phosphate ester compound, acetylacetone and ITO particles having particle size of 35 nanometers, and the glass laminate with the interlayer (Example 1). Kobata et al also disclose claimed 2-ethylhexylic acid (i.e. 2-ethyl hexanoic acid) (Col. 11, lines 36-44). Kobata et al disclose surfactant such as sodium laurel sulfate (Col. 15, lines 55-57). Kobata et al's plasticizers include phosphate ester plasticizers, monobasic acid esters, polybasic acid esters and their blends (Col. 11, line 24 to col. 12, line 2). Kobata et al do not specifically disclose claimed solubility parameter and claimed relative permittivity of surfactant.

Coaker et al, which has been discussed above in paragraph 5, teach a laminated glass with improved edge stability due to phosphate ester plasticizer.

Ma, which has been discussed above in paragraph 6, teaches a fire resistant glass laminate made with an interlayer comprising phosphate ester plasticizer.

Mont et al disclose an interlayer and a glass laminate made with the interlayer. Mont et al's interlayer comprises: polyvinyl butyral resin, plasticizer and buffer. Mont et al's interlayer has improved oxidation resistance and, color and viscosity stability. Mont et al's buffer includes phosphate ester such as ethyl acid phosphate (i.e. triethyl phosphate) (Col. 3, lines 24-50, specifically line 28 for ethyl acid phosphate).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of this invention made to utilize disclosure of Coaker et al, Ma and Mont et al in the invention of Kobata et al to blend phosphate ester plasticizer with the conventional mono- and/or poly- basic acid ester plasticizer to improve edge stability, fire resistant and oxidation resistant. The claimed solubility parameter and relative permittivity are deemed inherently there in absence of showing other wise since the phosphate ester plasticizers disclosed by Coaker et al and/or Ma are the same as the claimed moisture resistance improver. Coaker et al's and Ma's phosphate ester plasticizer include ethyl acid phosphate (i. e. triethyl phosphate).

8. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. S. Nakarani whose telephone number is (571) 272-1512. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/D. S. Nakarani/  
Primary Examiner, Art Unit 1794**

DSN  
January 15, 2009.